Williams

part of U.S. Application Serial No. 07/347,291, filed May 2, 1989, now Patent No. 5,155,027, which is a continuation-in-part of U.S. Application No. 07/146,877, filed January 22, 1988, now abandoned.

At page θ , line 11, please delete "encodes" and substitute therefor --encoded -.

At page 14, line 6, please delete "Figure 1" and insert therefor --Figures 1A-1D--.

At page 14 line 7 please delete "illustrates" and insert therefor --illustrate--.

At page 14, line 24, delete " μ promoter, μ enh; μ enhancer" and insert therefor -- μ promoter; μ enh, μ enhancer-

At page 1/5, line /, please delete "Figure 11 illustrates and insert therefor --Figures 11A-11D illustrate--

At page 16, line 18, please delete "and/or are" and insert therefor -- and/or is--.

At page 18, line 11, please change "doamin" to --domain--.

At page 18, line 25, please change "Figure 1" to --Figures 1A and 1B--.

At page 18, line 27, after "amino acid 531" please insert -- (Figure 1B) --

At page 18, line 29, please delete "Figure 11" and insert therefor -- Figures 11A and 11B--.

At page 2λ , line 6, please delete "Figure 1" and insert therefor -- Figures 1A and 1B--.

At page 22, line 9, please delete "Figure 1" and insert therefor --Figures 1A and 1B--.

At page 22, line $\frac{1}{2}$, please delete "Figure 11" and insert therefor --Figures 11A and 11B--.

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At page 22, line 14, please insert "a" between "of" and "smaller".

At page 25, line 23, please delete "joined is" and substitute therefor --is joined--.

At page 25, line 27, please delete "varable" and insert therefor --variable--./

At page 46, line 1, please delete "Figure 11" and insert therefor -- Figures 11A-11D--.

At page 5%, line 1, please delete "Figure 1" and insert therefor --Figure 1B--,

At page 57, line 2, please delete "Figure 1" and insert therefor -- Figure 1B--.

At page 83, line 34, please delete "Figure 11" and insert therefor -- Figure 11A--,

At page 84, line 22, please delete "Figure 11" and insert therefor -- Figure 11B--.

At page 84, line 24, please delete "Figure 11" and insert therefor -- Figure 11B--.

At page 8%, line 7, please delete "was" and substitute therefor --were--.

IN THE CLAIMS:

Kindly amend the claims as follows: Please cancel claims 1-28, without prejudice. Please add the following/new claims:

A dimerized polypeptide fusion, comprising:

first and second polypeptide chains, wherein each of said polypeptide chains comprises a non-immunoglobulin polypeptide requiring dimerization for biological activity joined to a dimerizing protein heterologous to said nonimmunoglobulin polypepti**ć**e,

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The dimerized polypeptide fusion of claim 29 which is a homodimer.

- 31. The dimerized polypept/ide fusion of claim 29 wherein the dimerizing protein of one of said polypeptide chains comprises an immunoglobulin heavy chain constant region.
- The dimerized polypeptide fusion of claim 31 wherein the immunoglobulin heavy/chain constant region is joined to an immunoglobulin hinge region.
- The dimerized polypeptide fusion of claim 31 wherein the immunoglobulin heavy chain constant region is joined to an immunoglobulin variable region.
- The dimerized/polypeptide fusion of claim 33 34. wherein the immunoglobulin variable region is selected from the group consisting of V_H , $N\kappa$, and $V\lambda$.
- The dimeriz#d polypeptide fusion of claim 29 35. wherein the dimerizing protein one of said polypeptide chains comprises an immunoglobulin heavy chain constant region domain selected from the group donsisting of C_H1 , C_H2 , C_H3 , and C_H4 of a γ , α , ϵ , μ , or δ class/immunoglobulin heavy chain.
- The dimerized polypeptide fusion of claim 29 wherein the dimerizing protein one of said polypeptide chains comprises an immunoglobulin light chain constant region.
 - 37. A multimerized polypeptide fusion, comprising:

a non-immunoglobulin polypeptide requiring multimerization for biological activity joined to an immunoglobulin light chain constant region; and

an immunoglobulin heavy chain constant region domain selected from the group consisting of $C_H 1$, $C_H 2$, $C_H 3$, and $C_H 4$.

- 38. The multimerized polypeptide fusion of claim 37 which is a tetramer comprising four polypeptide fusions each having a non-immunoglobulin polypeptide joined to a multimerizing protein.
- 39. The multimerized polypeptide fusion of claim 37 wherein the multimerizing protein comprises an immunoglobulin heavy chain constant region.
- 40. The multimerized polypeptide fusion of claim 39 wherein the immunoglobulin heavy chain constant region is joined to an immunoglobulin hinge region.
- 41. The multimerized polypeptide fusion of claim 39 wherein the immunoglobulin heavy chain constant region is joined to an immunoglobulin variable region.
- 42. The multimerized polypeptide fusion of claim 41 wherein the immunoglobulin variable region is selected from the group consisting of V_H , V_K , and V_λ .
- 43. The multimerized polypeptide fusion of claim 37 wherein the multimerizing protein comprises an immunoglobulin heavy chain constant region domain selected from the group consisting of C_H1 , C_H2 , C_H3 , and C_H4 of a γ , α , ϵ , μ , or δ class immunoglobulin heavy chain.



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44. The multimerized polypeptide fusion of claim 37 wherein the multimerizing protein comprises an immunoglobulin light chain constant region.

45. A heteromultimeric polypeptide fusion, comprising:

a first polypeptide fusion comprising a first non-immunoglobulin polypeptide joined to a first multimerizing protein heterologous to said first non-immunoglobulin polypeptide and a second polypeptide fusion comprising a second non-immunoglobulin polypeptide joined to a second multimerizing protein heterologous to said second non-immunoglobulin polypeptide.

- 46. The heteromultimeric polypeptide fusion of claim 45 wherein the first and second non-immunoglobulin polypeptides each comprise an amino acid sequence selected from the group consisting of (A) the amino acid sequence of Figures 1A-1D (Sequence ID Numbers 1 and 2), and (B) the amino acid sequence of Figures 11A-11D (Sequence ID Numbers 35 and 36).
- 47. The heteromultimeric polypeptide fusion of claim 45 wherein the first multimerizing protein is different from the second multimerizing protein.
- 48. The heteromultimeric polypeptide fusion of claim 47 wherein the first and second non-immunoglobulin polypeptides are the same.
- 49. The heteromultimeric polypeptide fusion of claim 45 wherein the first and second multimerizing proteins

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each comprise an immunoglobulin heavy chain constant region or an immunoglobulin light chain constant region.

- 50. The heteromultimeric polypeptide fusion of claim 45 which comprises a first polypeptide fusion having a first non-immunoglobulin polypeptide joined to a first immunoglobulin constant region and a second polypeptide fusion having a second non-immunoglobulin polypeptide fused to a second immunoglobulin constant region different from the first immunoglobulin constant region.
- 51. The heteromultimeric polypeptide fusion of claim 50 wherein the first multimerizing protein comprises an immunoglobulin heavy chain constant region and the second multimerizing protein comprises an immunoglobulin light chain constant region.
- 52. The heteromultimeric polypeptide fusion of claim 49 wherein one of said multimerizing proteins comprises an immunoglobulin heavy chain constant region joined to an immunoglobulin hinge region.
- 53. The heteromultimeric polypeptide fusion of claim 49 wherein one of said multimerizing proteins comprises an immunoglobulin heavy chain constant region joined to an immunoglobulin variable region.
- 54. The heteromultimeric polypeptide fusion of claim 53 wherein the immunoglobulin variable region is selected from the group consisting of V_H , V_K , and V_{λ} .
- 55. The heteromultimeric polypeptide fusion of claim 45 wherein one of said multimerizing proteins comprises

